

WHAT IS CLAIMED IS:

1. An ink jet head substrate having a plurality of heating elements and an input line for inputting a pulse width regulating signal regulating a width of a drive pulse to be applied to the heating elements on
5 a base substrate,

wherein a logic circuit for supplying the drive pulse to be applied to the heating elements at staggered timing is provided on the input line for
10 inputting the pulse width regulating signal.

2. An ink jet head substrate according to claim 1, further comprising:

a driver which drives the plurality of heating
15 elements according to image data;

a block selection unit for dividing the plurality of heating elements into blocks for a predetermined number of heating elements to drive the heating elements in a time division manner with the
20 divided block as a unit;

a drive control logic which controls a drive signal to be given to the driver; and

a hysteresis circuit which is provided in an input portion of the drive control logic and makes an
25 input data threshold value different at rising and falling.

3. An ink jet head substrate according to claim
1,
wherein the logic circuit comprises CMOS
inverters of even number stages connected serially.

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4. An ink jet head substrate according to claim
1,

wherein a shift register for outputting image
data, which is inputted serially, in parallel, and a
10 latch circuit temporarily storing data outputted from
the shift register are further provided on the
substrate, and

the heating elements, the driver, the input
unit, the block selection unit, the shift register,
15 and the latch circuit are formed on the substrate,
and the logic circuit has a form of an inverter
circuit which is formed by a film forming process
identical with that for a drive control logic system
including the shift register and the latch circuit.

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5. An ink jet head substrate according to claim
4,
wherein the inverter circuit is a CMOS inverter
circuit.

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6. An ink jet head comprising:
an ink jet head substrate according to claim 1;

and

a member which is combined with the ink jet
head substrate and forms liquid paths relating to the
heating elements and ink discharge ports forming one
5 end of the liquid paths.

7. An ink jet print apparatus comprising:
an ink jet head according to claim 6; and
means for conveying a print medium relatively
10 to the ink jet head.

8. An ink jet print apparatus according to
claim 7, further comprising a carriage which
detachably supports the ink jet head and causes the
15 ink jet head to scan the print medium.